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ENVIRONMENTAL IMPACT REPORT

for the

PROPOSED AMENDMENT TO THE
OFFICIAL REDEVELOPMENT PLAN FOR THE
EMBARCADERO-LOWER MARKET APPROVED
REDEVELOPMENT PROJECT E-1

GOLDEN GATEWAY CENTER PORTION
PHASE III

EE76.263

September 24, 1976

SAN FRANCISCO DEPARTMENT OF CITY PLANNING
100 Larkin Street
San Francisco, CA 94102

D

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CHAPTER I. SUMMARY

The Redevelopment Agency has initiated an amendment to the official redevelopment plan for the Embarcadero-Lower Market Approved Redevelopment Project E-1, affecting Phase III of the Golden Gateway Center portion of the Project. Golden Gateway Phase III includes Assessor's Blocks 167, 168 and 171, which are bounded by Broadway and Front, Jackson and Drumm Streets (exclusive of Sidney J. Walton Square), and is the last unsold parcel in the development.

The amendments would reduce the anticipated number of dwelling units in Golden Gateway Phase III from 1,299 to 400, and the height envelope from twenty-five stories to eighty-four feet (approximately eight stories). They would permit approximately 240,000 square feet of general commercial and office use facilities, where no such space had previously been allowed. Maximum lot coverage would generally increase from 20% to 40% for the residential levels of occupancy, and would become unlimited for those levels of non-residential use below the lowest residential level. Parking requirements would be established for non-residential uses, while being reduced for residential units.

The amendment would serve to reduce the anticipated production or consumption of solid wastes, liquid wastes, water and natural gas in future development on the site, and increase that for electricity. It would reduce building height envelopes, thereby reducing view blockage, street-level winds and shadows, while increasing permitted land coverage, thereby reducing upper level open space. It would reduce the number of dwelling units, and consequently, the evening population, while increasing the amount of commercial space and the daytime population. Parking spaces

would be reduced, along with overall automobile traffic generation.

Mitigation measures include policies related to archaeological or historical finds, energy conservation measures and the review of future plans for development in Phase III by the Redevelopment Agency, pursuant to the Redevelopment Plan, as well as other measures.

Alternatives discussed include the no-project alternative, an increase in dwelling units within the proposed building envelopes, inclusion of a percentage of low- or moderate-income housing, an increase in office space within the proposed building envelopes and other alternatives.

This Environmental Impact Report is prepared pursuant to the California Environmental Quality Act of 1970, as amended, and reviews the effects upon the environment of the proposed redevelopment plan amendment. This also constitutes the environmental review for future development on the three affected blocks, pursuant to Section 21090 of the Act.

CHAPTER II. PROJECT DESCRIPTION

The San Francisco Redevelopment Agency has proposed to amend Section 804 of the Redevelopment Plan for the Embarcadero-Lower Market Approved Redevelopment Project E-1, in order to reduce the height envelope for affected portions of the Project. The Redevelopment Plan for the Project was originally adopted by the San Francisco Board of Supervisors in May 1959 and has previously been amended in 1961, 1964 (twice), 1967 and 1968.^{1/} The proposed amendment would affect Phase III of the Golden Gateway Center portion of the Project, reducing the number of dwelling units, the height envelope of buildings, and parking spaces, and increasing the amount of general commercial and office space and lot coverage.

The Redevelopment Project is in the northeast quadrant of the City and County of San Francisco, in the San Francisco Bay Region (see Exhibits I and II). The Project is generally bounded by Broadway, The Embarcadero, and Market, Drumm, Sacramento, Battery, Jackson and Front Streets (see Exhibit III). The Golden Gateway Center portion is to the north of Clay Street and has been developed to this date by the Golden Gateway Center, a limited partnership, under a Land Disposition Agreement with the Redevelopment Agency.

Phase III of the Golden Gateway Center portion includes Assessor's Blocks 167, 168 and 171, bounded by Broadway and Drumm, Jackson, Davis, Pacific and Front Streets. These blocks are the last unsold parcel in the

^{1/} Board of Supervisors Ordinance No. 552-58 (October 14, 1958), No. 208-61 (July 31, 1961), No. 196-64 (July 13, 1964), No. 194-64 (November 23, 1964), No. 123-67 (May 15, 1967) and No. 204-68 (July 22, 1968). The Redevelopment Plan is on file and available for review at the Department of City Planning and the Redevelopment Agency.

project; the remainder of the Project has been developed or sold for development.

The amendments would modify the Residential Area portion of the Redevelopment Plan, reducing the anticipated number of dwelling units within the Golden Gateway Center portion from 2,294 to 1,654, and effecting other changes (see Appendix A). With respect to Phase III, the amendments would reduce the anticipated number of dwelling units from 1,299 to 400 and the height envelope from twenty-five stories to eighty-four feet (approximately eight stories). They would permit approximately 240,000 square feet of general commercial and office use facilities, where no such space had previously been allowed. Maximum lot coverage would increase from 20% to 40% for the levels above the first level of residential occupancy, except that after forty feet of such levels, the maximum lot coverage would revert to 20%. Lot coverage for non-residential uses below the first level of residential occupancy would become unlimited, while previously only the first two levels of non-residential use were so treated.¹ Parking requirements for dwelling units would be reduced from one parking space for each dwelling unit to one for each three studios, one for each two one-bedrooms, and three for each four larger units. Parking requirements would be established for offices, at one for each 500 square feet of occupied floor area, and neighborhood shopping and general commercial, at one for each 500 square feet of occupied floor area in excess of 75,000 square feet. The Redevelopment Plan amendment would also state that where neighborhood shopping, general commercial and office uses are developed with

^{1/} Although this represents a change in the Redevelopment Plan, in fact the proposed lot coverage would be consistent with that allowed on a block-by-block basis under Phases I and II of the Golden Gateway Center portion. It was understood at the time of development of those earlier phases that at the time Phase III was built, a variance from the Plan standards would be granted. This portion of the Plan Amendment would obviate the need for such variance (as per discussion on September 17, 1976, with William Mason, San Francisco Redevelopment Agency).



EXHIBIT

SAN FRANCISCO BAY REGION

- CITY WITH OVER 20,000 POPULATION
- COUNTY SEAT
- COUNTY LINE
- STATE, U.S. OR INTERSTATE HIGHWAY



TOPOGRAPHIC MAP OF SAN FRANCISCO

PREPARED BY THE SAN FRANCISCO DEPARTMENT OF CITY PLANNING · 1960

FILE 15.2-428

EXHIBIT II

BROADWAY

PHASE II AREA

PACIFIC

JACKSON

WASHINGTON

MERCHANT

CLAY

COMMERCIAL

SACRAMENTO

HALLECK

CALIFORNIA

PINE

BUSH

BATTERY

FRONT

DAVIS

DRUM

MAIN

BEALE

FREMONT

MARKET

FIRST

EMBARCADERO

FREEWAY

STUART

RAPID TRANSIT STATION

Ridney G. Hallam Square

Recreation Facilities

Justin Herman Park

Ferry

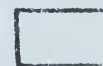
Building



HOUSING

- 1 Richard Henry Dana House
- 2 Buckelew House
- 3 Macondray House
- 4 William Heath Davis House
- 6 Townhouses

Towers



OTHER

- 8 Alcoa Building
- 9 Security Pacific Bank Building
- 10 Levi Straus Building
- 11 Office Building Under Construction
- 12 Future Office Building
- 13 Embarcadero Center Shops
- 14 Hyatt Regency Hotel
- 15 Future Theaters
- 16 Fountain

GOLDEN GATEWAY

SAN FRANCISCO REDEVELOPMENT AGENCY

0 FEET 300



EXHIBIT III

SAN FRANCISCO DEPARTMENT OF CITY PLANNING

residential uses, residential should be the primary use and should take precedence over other permitted uses upon development unless the Redevelopment Agency finds such precedence to be economically infeasible.

The amendment to the Redevelopment Plan would require review by the City Planning Commission for conformity with the Master Plan and then would require adoption of an ordinance by the Board of Supervisors and signature by the Mayor. This is anticipated to occur during the final months of 1976.

As the Redevelopment Plan and its amendments were adopted prior to the enactment of the California Environmental Quality Act, it has received no previous environmental review by the City and County of San Francisco.^{1/} In January 1973, however, the City Planning Commission certified a Final Environmental Impact Report^{2/} for the development of Phase III of the Golden Gateway Center portion in accordance with the existing Redevelopment Plan. The Commission found that the project would have a significant effect on the environment and that the blockage of existing views and the reduction of the space between downtown high-rise buildings and Telegraph Hill low-rise residential buildings were significant adverse environmental effects.

^{1/} The San Francisco Redevelopment Agency, under Resolution No. 142-76 on August 17, 1976, certified an environmental impact report for the subject Plan Amendment. Chapter 31 of the San Francisco Administrative Code, however, provides that the Department of City Planning must act for the City and County in such review.

^{2/} EEIO, Environmental Impact Report, Building Permit Applications for Golden Gateway Center - Phase III, Residential Complex and Auxiliary Shopping, Health and Recreation Facilities, November 14, 1972, and City Planning Commission Resolution No. 6947, January 4, 1973

CHAPTER III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

The three blocks affected by the proposed amendment to the Redevelopment Plan are Assessor's Block 167, bounded by Broadway and Davis, Pacific and Front Streets, Assessor's Block 168, bounded by Broadway and Drumm, Pacific and Davis Streets, and Assessor's Block 171, bounded by Pacific, Drumm, Jackson and Davis Streets (see Exhibit III, page 7). In addition, adjoining portions of Pacific and Drumm Streets, which under the existing redevelopment plan are proposed for closure, would similarly be affected.

Block 167 is leased by the Redevelopment Agency on a short-term basis to a private individual for use as a public parking lot with app. 650 spaces. Block 168 is fenced but otherwise unimproved, and is leased on a short-term basis to Golden Gateway Center as a storage yard. Block 171 was improved by the Golden Gateway Center under agreement with the Redevelopment Agency with landscaping and a short-term guest parking area with 80 spaces (see Exhibits IV and V).

Sidney G. Walton Square is immediately to the south and west of the affected blocks, and has been developed by Golden Gateway Center as a park with landscaping, pathways and seating areas. A pedestrian bridge provides direct access from this park to the developed portions of the Golden Gateway Center portion to the south.

The adjacent developed section of the Golden Gateway Center portion includes two 22-story apartment buildings (Richard Henry Dana and William Heath Davis), two 25-story apartment buildings (Buckelew and Macondray) and 58 townhouses, for a total of 1,254 dwelling units with

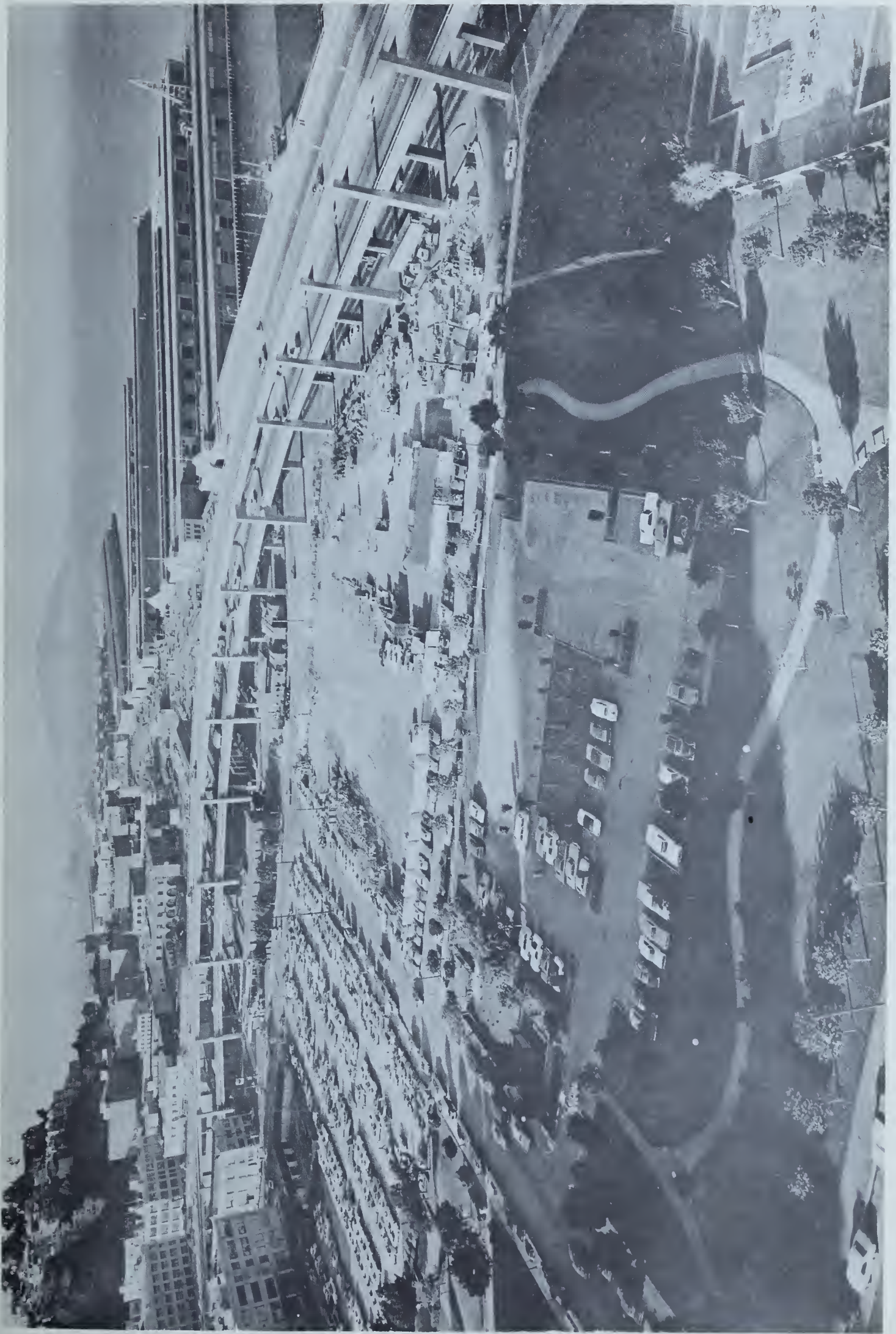


EXHIBIT IV - THREE BLOCKS AFFECTED BY PLAN AMENDMENT, LOOKING NORTH FROM WILLIAM HEATH DAVIS BUILDING. TEMPORARY PARKING AND LANDSCAPING IN FOREGROUND, CONSTRUCTION YARD AND PUBLIC PARKING LOT, AND EMBARCADERO FREEWAY, TO REAR.



EXHIBIT V - THREE BLOCKS AFFECTED BY PLAN AMENDMENT, LOOKING SOUTHEAST FROM UNION STREET ON TELEGRAPH HILL. EXISTING GOLDEN GATEWAY RESIDENTIAL COMPLEX IN RIGHT BACKGROUND.

927 parking spaces. In addition, Golden Gateway Center has constructed a public garage (1,325 spaces), the Alcoa Building (24 stories and 400,000 square feet of office space), Maritime Plaza and two low-rise commercial buildings thereon, and resident-oriented commercial and recreation space.

Remaining Redevelopment Project development includes the Security Pacific Bank Building (One Embarcadero Center, 46 stories and 750,000 square feet), the Levi Strauss Building (Two Embarcadero Center, 34 stories and 700,000 square feet), an office building under construction (Three Embarcadero Center, 34 stories and 700,000 square feet) and a proposed future office building (Four Embarcadero Center, maximum of 60 stories). The Hyatt Regency Hotel (18 stories, 340 rooms), Embarcadero Center shops, Justin Herman Park and the Embarcadero Center Station of the Bay Area Rapid Transit District (BART) are also within the Project.

The Redevelopment Project at its western edge adjoins the Embarcadero Freeway, The Embarcadero, and the piers of the San Francisco waterfront. Its southern and southwestern boundary is with the Financial District of the city. To the west of the Golden Gateway Center portion, Phase III, are low-rise commercial buildings with Jackson Square, a designated Historic District^{1/} one block to the west. To the northwest is Broadway, an entertainment-oriented commercial street, and Telegraph Hill, a low to medium density residential area. To the north are low-rise restaurant and office buildings, parking lots and an access ramp to the Embarcadero Freeway.

^{1/} Board of Supervisors Ordinance No. 221-72, August 9, 1972

The majority of the Golden Gateway Center portion, including Phase III, is within an R-5-C (Highest Density Multiple Residential-Commercial Combining) district, which has been proposed by the Department of City Planning for zoning reclassification to a PR (Planned Residential) district.^{1/} The existing district would permit commercial uses in or below the ground story of a building, while the proposed district would be regulated by the special conditions or restrictions placed on it at the time of its development as a Redevelopment Agency project. Property in the vicinity is within a P (Public Use) district where presently developed as open space; a C-3-O (Downtown Office) district to the south and west; a C-2 (Community Business) district to the west, north and east; and an M-1 (Light-Industrial) district to the northeast along the piers (see Exhibit VI).

The height and bulk district for the majority of Phase III of the Golden Gateway Center portion is 275-E, while a portion is within an 84-E district. Permitted heights are generally lower to the north and higher to the south and southwest. The Embarcadero Center portion of the Redevelopment Project is within the least restrictive district, 400-I (see Exhibit VII).^{2/}

^{1/} City Planning Commission Resolution No. 7499, May 20, 1976, and Memorandum of May 20, 1976, from the Acting Director of Planning to the City Planning Commission concerning Residential Zoning Study, Proposed Zoning Maps and District Standards

^{2/} Section 250(f) of the City Planning Code provides, however, that the requirements of height and bulk districts shall not supersede approved redevelopment plan provisions as to height and bulk for buildings or structures on sites for which a redeveloper had been formally selected by the Redevelopment Agency prior to August, 1971. Thus the Four Embarcadero Center Building could exceed those limits.

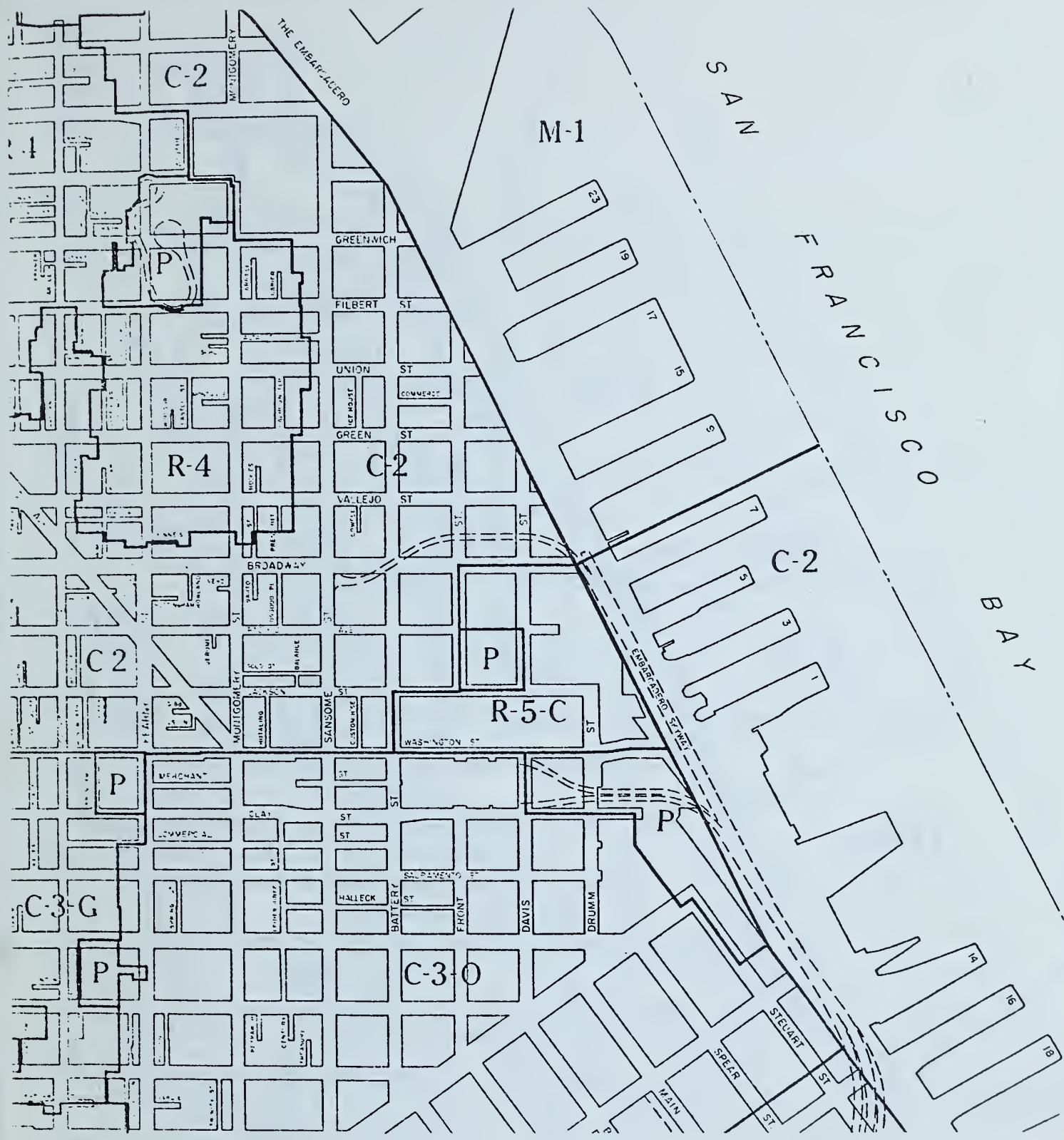


EXHIBIT VI

ZONING MAP USE DISTRICTS

VICINITY OF EMBARCADERO - LOWER MARKET
APPROVED REDEVELOPMENT PROJECT E-1

B. TOPOGRAPHY, GEOLOGY AND SEISMICITY

The Redevelopment Project is located on filled land which was once within Yerba Buena Cove between Rincon Point, at the foot of the Bay Bridge, and Clark's Point, at Telegraph Hill. The land is flat and consists of artificial fill (predominantly dune sand but includes silt, clay, rock waste, man-made debris and organic waste) placed over compressible bay muds.^{3/}

The Project is within an area of major potential liquefaction and subsidence hazard and potential tsunami inundation, and the estimated intensity of future ground shaking in the event of a 1906-type earthquake is considered violent, with lateral displacement of streets and ground fissuring.^{4/}

C. CLIMATE AND AIR QUALITY

The San Francisco climate is characterized by cool summers and mild winters. Coastal fogs are characteristic, as are pronounced wet and dry seasons. The Redevelopment Project, at the eastern side of the city, would generally experience less fog and low cloudiness than other parts of the city.

Northwesterly and westerly winds are the most frequent and strongest

^{3/} San Francisco Seismic Safety Investigation, prepared by John A. Blume & Associates, Engineers, June 1974, "Engineering Geologic Map of San Francisco" and "Areas of Major Potential Subsidence Hazard".

^{4/} Ibid., "Areas of Major Potential Liquefaction Hazard", "Areas of Major Potential Subsidence Hazard", "Areas of Potential Tsunami Inundation", and "Estimated Intensity of Future Ground Shaking". Liquefaction is the earthquake-induced transformation of a stable granular material, such as soil, into a fluidlike state, similar to quicksand. Tsunamis are sea waves, which for the Bay Area would most likely be seismically induced.

winds at all seasons, while wind frequencies and speeds are lower in spring, fall and winter. South winds are infrequent except during winter storms, when moderate to strong wind is often combined with rain.

Air quality at the affected blocks is related generally to contaminants originating from three sources: local pollutants from the present on-site parking lots and storage yard, pollutants from adjoining street traffic and pollutants from remote sources. Climactic conditions play an important role in influencing air quality, as they determine the rates at which contaminants are diluted and dispersed. Generally, the period of best air quality corresponds to summer months with the higher wind speeds.

The Redevelopment Project is within the Bay Area Air Quality Maintenance Area (AQMA)^{5/} for photochemical oxidants, particulate matter and sulfur dioxide.

D. TRANSPORTATION

The affected blocks are served by a network of public streets and mass transit services. A portion of the Embarcadero Freeway is immediately to the north and east of the Redevelopment Project, but is proposed to be removed by the Transportation Element of the Comprehensive Plan. The Transportation Element designates Broadway, The Embarcadero, Washington Street and Clay Street as Primary Vehicular Streets, and Clay, Sacramento

^{5/} An AQMA is defined as an area with the potential for exceeding any national air quality standards in the period from 1975 to 1985.

Battery and Sansome Streets as Transit Arterial Streets. A bicycle route is designated from Front to Jackson and then Drumm Streets.^{6/}

E. ANIMALS AND PLANTS

Block 167 has landscape plantings in tubs in various locations on the periphery of the block and, along with Block 168, has scattered weeds. Block 171 has been landscaped in portions with trees, shrubs, lawns and contoured berms. Insects, soil organisms and birds are found in the three blocks, and small mammals are potential inhabitants.

F. ARCHAEOLOGICAL, HISTORICAL AND CULTURAL RESOURCES

The Redevelopment Area is on filled land, formerly Yerba Buena Cove, and remains of ships and piers are likely as part of the artificial fill. There is a high potential for archaeological remains.^{7/}

G. NOISE

The Transportation Noise Section of the Environmental Protection Element indicates Front, Davis and Jackson Streets in the vicinity of the affected blocks as having a noise level of 65 Ldn, Broadway as 70 Ldn, and the Embarcadero Freeway as 75 Ldn. The background noise level in the area is indicated as 65 Ldn.^{8/} The Element indicates that residential

^{6/} Transportation Element of the Comprehensive Plan, San Francisco Department of City Planning, April 27, 1972, "Throughfares Plan", "Transportation Plan for Downtown and Vicinity", and "Bicycle Plan".

^{7/} San Francisco Archaeological Sensitivity Map, prepared by James Heid, Consulting Archaeologist, on file at the Department of City Planning.

^{8/} Transportation Noise Section of the Environmental Protection Element of the Comprehensive Plan, Department of City Planning, September 19, 1974, "Throughfare Noise Levels, 1974", "Background Noise Levels, 1974", and "Land Use Compatibility Chart for Community Noise". Ldn is a noise measure based on human reaction to the cumulative exposure to noise over a 24-hour period, taking into account the greater annoyance value of nighttime noise.

development in areas with sound levels of 60 to 70 Ldn, and office development with 65 to 75 Ldn, should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

CHAPTER IV. THE ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

A. POPULATION

The permitted number of dwelling units would decrease from approximately 1300 to 400. Assuming the San Francisco average of 2.34 persons per dwelling unit¹, the potential residential population would be reduced from approximately 3040 to 940 individuals.

The permitted amount of commercial space would be approximately 240,000 square feet, while formerly the only commercial use permitted was 22,700 square feet of neighborhood commercial. No neighborhood commercial square footage is specifically allocated in the amendment, as it is included within the overall category of 240,000 square feet of neighborhood shopping, general commercial and office use facilities. In order to be conservative, that space has all been assumed as office space, as office space would generally have a greater employee population than other commercial space, and generate more trips than neighborhood shopping space. Assuming an office population of one person per 200 square feet, for an increase of approximately 1200 persons, and a now-eliminated neighborhood commercial population of one person per 800 square feet, for approximately 30 persons, the commercial population would be increased from approximately 30 to 1170 individuals.

¹/ San Francisco 1970 Census Summary & Analysis, A Report Based Upon the 1970 Census of Population & Housing, Department of City Planning, page 2. This compares with a population of 1938 and a housing unit count of 1701 in the census tract (#116) which generally has the same boundaries as the Redevelopment Project, and thus, likely errs on the high-side.

The decreased residential population would tend to be present primarily during evenings and weekends, while the increased commercial population would be present primarily during weekdays. The adjoining residential population is that of the existing Golden Gateway Center portion of the Project, with 1254 dwelling units and approximately 2930 residents (at 2.34 per unit). Existing commercial populations are to the north, east, and west of the affected blocks, and adjoin and include the other portions of the Project.

The shift in anticipated population levels from residential to commercial would make the project more similar to the existing mix in the vicinity of the affected blocks. The population would, therefore, draw upon similar resources and services as that of existing development.

The Northern Waterfront Plan, an adopted portion of the Master Plan¹, indicates the three affected blocks as "Mixed: Service Commercial/Residential." The Residence Element², in New Residential Development Policy 2, calls for encouraging the conversion of underutilized non-residential land to residential use, and for encouraging new residential development in the downtown area. Housing Opportunities Policy 2 calls for encouraging economic integration, and calls for encouragement of private developers to include a percentage of units in new market rate housing for occupancy by low- and moderate-income households. The proposed redevelopment plan amendment would reduce the amount of potential

1/ Northern Waterfront Plan, Department of City Planning, June 1969, "Northern Waterfront Land Use Plan."

2/ Residence Element of the Comprehensive Plan, Department of City Planning, December 1975.

housing in the waterfront and downtown area¹, and has no incentives for the provision of low- or moderate-income housing.

B. SEISMIC

Development resulting in increased population densities in this area of filled land, where potential seismically-induced liquefaction, subsidence and violent ground shaking exist, would subject an increased number of persons to such hazards. The amendment to the redevelopment plan would decrease the residential population and increase the commercial population, for a total net decrease of approximately 960 persons.

The Community Safety Element calls for applying a minimum level of acceptable risk to structures and uses of land based upon the nature of use, importance of the use to public safety and welfare, and density of occupancy. It identifies and presents standards for three levels of acceptable risk, of which Risk Level 2 includes both large apartment buildings and complexes and office buildings².

C. CLIMATE AND AIR QUALITY

Amendment of the redevelopment plan, in establishing standards for future development of the three affected blocks, could have an impact on air quality in terms of construction operations, building emissions and vehicle emissions, and on wind levels and shadows.

^{1/} The three affected blocks constitute the last remaining site of substantial size in the downtown area south of Broadway and north of Market Street that could accommodate a large new residential development with associated services.

^{2/} Op. cit., Life Safety Policy 1. Risk Level 2 applies generally to structures of medium-to-high density occupancy and structures whose use following a disaster might be desirable but not critical; no mechanical failure should occur that could cause loss of life.

Construction operations associated with future development would result in an increase in the level of particulates (sand, dust) in the atmosphere. The amendment would reduce the scale of future development, and consequently, generation of particulates would probably be lessened.

Building emissions from future development would shift from those associated predominantly with residential buildings to those associated predominantly with commercial buildings, and would likely decrease due to less consumption of natural gas (see assumptions in Chapter IV, Section I). As there would be an overall reduction in scale of permitted future development, such emissions would likely decrease.

In analyzing transportation impacts of the project, the anticipated daily number of overall vehicle trips is expected to decrease, along with peak and 8-hour trips (see Chapter IV, Section D, and see Appendix B, Transportation and Air Quality, for this and other projections).

Based upon a reduction in traffic generation, carbon monoxide levels would be expected to decrease. Using a design year of 1978, and information as to San Francisco carbon monoxide levels and dispersion factors, carbon monoxide pollutant levels would be as indicated in Table I¹.

¹/ Detailed calculations are on file at the Department of City Planning.

TABLE I
AIR QUALITY

| | <u>Present Plan</u> | | <u>Amended Plan</u> | | <u>Difference</u> | |
|---|---------------------|---------------|---------------------|--------|-------------------|--------|
| Carbon Monoxide Concentration (micrograms/cubic meter Mg/m^3) | 1-hour | 8-hour | 1-hour | 8-hour | 1-hour | 8-hour |
| Air Quality Standard | 40,000 | 10,000 | Same | | Same | |
| Existing | 3700- 8200 | 1300- 2870 | Same | | Same | |
| Battery/Sansome Link | 1,460 | 230 | 1,070 | 130 | -390 | -100 |
| 1/2 Km. Radius | 290 | 170 | 160 | 90 | -130 | -80 |
| Regional ($\times 10^{-7}$) ¹ | 5 | 4 | 3 | 2 | -2 | -2 |

¹($\times 10^{-7}$) = (1/10 million)

The existing Golden Gateway Center apartments are the nearest sensitive receptor with respect to air pollution generated by future development. The nearest apartments would be exposed under the amended plan to carbon monoxide concentrations of 590 and 70 Mg/m^3 , for one- and eight-hour averaging times, respectively, compared to 810 and 120 Mg/m^3 under the present plan.

Future wind levels and shadows in the vicinity of the affected blocks would be expected to decrease, due to the reduction in permitted heights of buildings from 25 stories to approximately 8 stories.

D. TRANSPORTATION

Residential units and commercial space would generate transit, automobile, walk and other trips. Appendix B, Transportation and Air Quality, indicates the methodology and the assumptions used in deriving trip generation and the

modal split for those trips, and for estimating automobile trip distribution.

Table II, Transportation, indicates the results of the analysis. Generally, daily commercial trips would increase over that anticipated from the present plan, and residential trips would decrease. Overall, there would be fewer trips generated by development under the amended plan than under the present plan.

TABLE II
TRANSPORTATION

| | <u>Present Plan</u> | <u>Amended Plan</u> | <u>Difference</u> |
|-----------------------------------|---------------------|---------------------|-------------------|
| Daily Commercial Trips | 200 | 3,000 | 2,800 |
| Transit | 90 | 1,350 | 1,260 |
| Automobile | 90 | 1,350 | 1,260 |
| Walk | 20 | 300 | 280 |
| Daily Automobile Generation | 5,270 | 2,650 | -2,620 |
| Commercial (at 1.3 persons/auto) | 70 | 1,050 | 980 |
| Residential | 5,200 | 1,600 | -3,600 |
| Peak Hour (5-6 P.M.) | 700 | 470 | -230 |
| Automobile Distribution | | | |
| Battery/Sansome, north of Jackson | | | |
| Daily | 1,750 | 900 | -850 |
| Peak Hour | 220 | 160 | -60 |
| Capacity/Hour | 1,300 | Same | N/A |
| Battery/Sansome, south of Jackson | | | |
| Daily | 3,500 | 1,800 | -1,700 |
| Peak Hour | 440 | 320 | -120 |
| Capacity/Hour | 1,440 | Same | N/A |
| Clay/Washington, east of Battery | | | |
| Daily | 2,600 | 1,300 | -1,300 |
| Peak/Hour | 330 | 230 | -100 |
| Capacity/Hour | 2,000 | 2,000 | N/A |
| Parking | 1,300 | 630 | -670 |
| (Existing on site) | 740 | Same | N/A) |

The transit trips generated would use primarily the nearby No. 32-Embarcadero and No. 42-Third Street bus lines, which run on The Embarcadero and Sansome/Battery Streets, respectively. These lines are above recommended 60-minute peak load factors by 2% at the A.M. peak and by 5% and 0%, respectively, at the P.M. peak, and have been proposed for upgrading in the future (see Appendix B, Section A(2)).

The automobile trips generated would use primarily Sansome and Battery Streets, a one-way couple 2 to 3 blocks west of the affected blocks, and Clay and Washington Streets, which provide access to the Embarcadero Freeway. Trips would also occur on streets such as Jackson, Pacific, Broadway, The Embarcadero, Davis, Drumm and Front, as well as on such other one-way couples as Pine and Bush Streets, and Kearny and Montgomery Streets. Streets in the downtown area are generally at or near their peak hour capacity, and automobile traffic from the affected blocks would contribute to existing peak hour congestion.

The parking on the affected blocks would be reduced from approximately 740 to 630 or less. This new parking would be for development on the affected blocks, and consequently, existing parking demand in the area would be unsatisfied. Such demand would be shifted to other parking areas, either less convenient or more expensive, or would be translated into fewer automobile trips and more transit or walk trips.

E. ANIMALS AND PLANTS

Landscaping on Block 171 would be removed as a result of the project, and this would affect both the component plants and any animals that might be found in that habitat.

F. ARCHAEOLOGICAL AND HISTORICAL

Future developments, as governed by the redevelopment plan, would have the potential to disturb sites of buried ships, piers and other historical debris. Excavation and development could destroy or permanently obscure any such sites.

G. NOISE

Noise would be increased in the vicinity of potential future development of the affected blocks, due to increases in traffic levels¹.

The existing and potential noise levels in the vicinity of the blocks would affect the future human occupancy of those blocks, as permitted by the redevelopment plan. Physiological and psychological effects might be anticipated² if no sound insulation were provided in future development, as called for by the Transportation Noise Section of the Environmental Protection Element³.

Construction of development permitted by the redevelopment plan amendment

1/ A doubling of traffic volumes would raise the noise levels by 3 dBA (decibels, or units of loudness on a scale giving a basic and direct measurement of the loudness of a sound), which in most cases the human ear cannot distinguish. Issue Paper 11, Part III. Noise, by Peter Hathaway, California Transportation Plan Task Force Member, July 1976, pp. 3-12.

2/ Ibid., pp. 21-28.

3/ Op. cit., "Land Use Compatibility Chart for Community Noise."

would produce temporary increases in noise levels. These would be expected to be lower than for the existing plan, due to a reduction or elimination of pile driving¹.

H. WATER CONSUMPTION AND LIQUID AND SOLID WASTES GENERATION

Residential units and commercial space would consume water and generate liquid and solid wastes (commercial space has been evaluated as office space). Using data on typical water consumption and waste generation patterns, it is possible to arrive at an estimate of these figures for future development as permitted under the redevelopment plan amendment.

In determining the water consumption and liquid waste generation, the following assumptions have been made.

- (1) Residents would consume 140 gallons of water per person per day².
- (2) Employees of office facilities would consume 15 gallons of water per person per day³.
- (3) Water consumption and liquid waste generation figures would be equivalent.

1/ Peak noise levels during operation of a diesel pile driver is approximately 97 dBA at 50 feet. Noise from Construction Equipment and Operations, NTID 300.1, December 1971.

2/ San Francisco Water Department Annual Report for Fiscal Year 1974-75, page 10. Per capita usage is determined by dividing total water usage (residential, commercial and industrial) by number of San Francisco residents, and should be considered as high.

3/ Metcalf & Eddy, Inc., Wastewater Engineering: Collection, Treatment, Disposal (New York: McGraw-Hill Book Company, 1972), p. 30.

In determining the solid waste generation, the following assumptions have been made:

- (1) Residents would generate 2.5 lbs. per person per day.
- (2) Office facilities would generate 1 lb. per 100 square feet per day¹.

On the basis of these assumptions, the residential, commercial and total water consumption and liquid and solid waste generation would be as indicated in Table III².

TABLE III
WATER CONSUMPTION AND LIQUID AND SOLID WASTE GENERATION

| | <u>Present Plan</u> | <u>Amended Plan</u> | <u>Difference</u> | <u>% Difference</u> |
|--------------|---------------------|---------------------|-------------------|---------------------|
| Water | (gpd) ¹ | (gpd) | (gpd) | |
| Residential | 425,600 | 131,600 | -294,000 | |
| Commercial | 500 | 17,600 | 17,100 | |
| Total | 426,100 | 149,200 | -276,900 | -65% |
| Liquid Waste | (gpd) | (gpd) | (gpd) | |
| Residential | 425,600 | 131,600 | -294,000 | |
| Commercial | 500 | 17,600 | 17,100 | |
| Total | 426,100 | 149,200 | -276,900 | -65% |
| Solid Waste | (lbs./day) | (lbs./day) | (lbs./day) | |
| Residential | 7,600 | 2,400 | -5,200 | |
| Commercial | 200 | 2,400 | 2,200 | |
| Total | 7,800 | 4,800 | -3,000 | -40% |

¹ gpd = gallons per day

Water consumption would be approximately 0.07% of the 225 million gallons per day (mgd) delivered by the San Francisco Water Department on an average day.

^{1/} Solid Waste Generation Factors in California, Technical Information Series, Bulletin No. 2, California Solid Waste Management Board, July, 1974.

^{2/} Detailed calculations are on file at the Department of City Planning.

Liquid waste would be treated at the North Point Water Pollution Control Plant, and would represent 0.23% of the 65 mgd capacity of that facility. During most rainy periods, the design capacity of the Plant is exceeded, resulting in untreated wastewater being discharged at overflow structures. The San Francisco Bay Regional Water Quality Control Board has cited the North Point Plant because it does not comply with required water quality standards, and presently prohibits any new discharges to the sewer system tributary to that Plant¹. Implementation of the City's Wastewater Management Master Plan (see Chapter V, Section G), which calls for eventual phasing out of this facility, will ultimately lead to substantial compliance with those requirements.

Solid waste generation would represent approximately 0.12% of the 2000 tons produced daily by the City as a whole. All solid waste generated would be disposed of at the landfill site in Mountain View, Santa Clara County, which, if the site is expanded, is expected to be operative for 7 years (1976-1983)².

I. ENERGY CONSUMPTION

Residential units and commercial space would consume electricity and natural gas (commercial space has been evaluated as office space). Using data on typical energy consumption patterns, it is possible to arrive at an estimate of the energy requirements of future development permitted under the redevelopment plan amendment.

¹/ San Francisco Bay Regional Water Quality Control Board, Cease and Desist Order Nos. 67-2, 73-55, 73-54, 74-159, and 76-58 (Order Nos. 76-67, 76-81 and 76-92 also apply).

²/ Conversation with Richard Haughey, Department of Engineering, City of Mountain View, August 4, 1976.

In determining the electrical requirements, the following assumptions have been made:

- (1) Residential units would be evenly split between one-bedroom, high-rise apartments and three-bedroom apartments, with electric cooking in each case, and would consume 200 kwh/mo. and 335 kwh/mo., respectively, with an additional 85 kwh/mo. for each unit for building operation¹.
- (2) Office space would consume 1.7 kwh/mo. for each square foot of floor area².

In determining the natural gas requirements for space heating and hot water, the following assumptions have been made:

- (1) Residential units would be evenly split between one-bedroom, high-rise apartments and three-bedroom apartments, and would consume 75×10^5 BTU/mo. and 100×10^5 BTU/mo., respectively³.

1/ HPMC-FHA, 4500.6, San Francisco Supplement No. 1, Selection of Utilities for Subsidized Housing in Region IX, U. S. Department of Housing and Urban Development, San Francisco Regional Office, December, 1972.

2/ Energy Consumption Figures for 1974-1975 Environmental Impact Reports for Non-Residential Developments, Department of City Planning, April, 1975. Figure derived by excluding the four extreme values and averaging the three remaining values.

3/ BTU: Abbreviation for British Thermal Unit. The quantity of heat required to raise one pound of water one degree Fahrenheit ($10^6 = 1$ million).

(2) Office space would consume 3912×10^5 BTU/mo. for each square foot of interior floor area¹, and interior floor area would be approximately 80% of gross floor area.

On the basis of these assumptions, the residential, commercial and total energy consumption would be as indicated in Table IV².

TABLE IV
ENERGY CONSUMPTION

| | <u>Present Plan</u> | <u>Amended Plan</u> | <u>Difference</u> | <u>% Difference</u> |
|-------------|--------------------------|--------------------------|--------------------------|---------------------|
| Electrical | (kwh/mo.) | (kwh/mo.) | (kwh/mo.) | |
| Residential | 459,000 | 141,000 | -318,000 | |
| Commercial | 39,000 | 408,000 | 369,000 | |
| Total | 498,000 | 549,000 | 51,000 | 10% |
| Natural Gas | ($\times 10^5$ BTU/mo.) | ($\times 10^5$ BTU/mo.) | ($\times 10^5$ BTU/mo.) | |
| Residential | 114,400 | 35,200 | -79,200 | |
| Commercial | 700 | 7,500 | 6,800 | |
| Total | 115,100 | 42,700 | -72,400 | -63% |

Peak daily residential electrical and gas demand is expected to occur in the early evening period, and minimum demand in the early hours of the morning. Peak daily commercial electrical demand would be expected in the afternoon, and gas demand in the morning.

¹/ Energy Consumption Figures for 1974-1975 Environmental Impact Reports for Non-Residential Developments, Department of City Planning, April 1975. Figure derived by excluding the four extreme values and averaging the three remaining values.

²/ Detailed calculations are on file at the Department of City Planning.

Peak yearly demand for both residential and commercial natural gas consumption would be highest in cold weather, due to space heating, which for San Francisco would be December through February.

As new building standards and manuals designed to effect energy conservation have recently been prepared (see Chapter V, Section H), these estimates should be considered as conservative.

Energy would also be consumed in the construction phase of any future development. Additionally, increases in number and length of commuter trips due to development permitted by the plan amendment would result in increased fuel consumption.

J. FIRE AND POLICE SERVICES

The plan amendment would substitute medium-rise construction for high-rise construction, and would shift from residential to commercial with some residential. The nearest fire station is Engine Company No. 13, at the southeast corner of Washington and Sansome Streets, approximately five blocks from the affected blocks.

Analysis of specific fire protection needs and capabilities would have to await plans for development on the affected blocks. However, the water supply and Fire Department staffing in the vicinity of the affected blocks generally would be adequate to handle permitted development on the site¹.

The plan amendment would decrease anticipated overall population levels in the affected blocks, while increasing the population during the day. The nearest police station is Central Station, at 766 Vallejo Street, approximately

¹/ Telephone conversation with Chief Robert E. Rose, San Francisco Fire Department, September 16, 1976.

eight blocks from the affected blocks; Central Station generally has the highest percentage of City police officers assigned to it.

Police incidents may be expected to vary proportional to the population; as the anticipated population would decrease due to the plan amendment, the anticipated number of police incidents and, consequently, the need for police services, would be expected to decrease.¹

K. VIEWS

The reduction in permitted heights of buildings from 25 stories to approximately 8 stories would result in less view blockage for residents on Telegraph and Nob Hills and in existing buildings in the Project. The height change would also provide a transition between the high-rise buildings of downtown and the low-rise buildings of the Northern Waterfront and Telegraph Hill.

L. NEIGHBORHOOD CONCERNS

Two citizen organizations commented on the final environmental impact report certified by the City Planning Commission in January 1973, for a development permitted under the existing redevelopment plan.²

The Telegraph Hill Dwellers expressed concern over views from the Bay and Russian, Nob and Telegraph Hills, over shadows affecting Walton Square, and over the best possible use of the land.

The San Francisco Ecology Center expressed concerns over seismic safety,

1/ Telephone conversation with Officer Robert Bernardini, San Francisco Police Department, September 23, 1976.

2/ Statements of Telegraph Hill Dwellers (December 15, 1972) and San Francisco Ecology Center (January 4, 1973) before the City Planning Commission, on file and available for review at the Department of City Planning.

impact of automobiles, shadows affecting Walton Square, loss of existing open space, population density, fire hazards, and lack of consideration of alternate uses such as a community service center and recreation and adult education facilities.

The amendment to the redevelopment plan would help satisfy those concerns relative to views, shadows and population density. It may or may not address the judgmental concerns expressed as to best possible use of the land, seismic safety, impact of automobiles, and fire hazards. It would not satisfy the concerns as to loss of existing open space and provision of alternatives such as a community service center and recreation and adult education facilities.

CHAPTER V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE IMPACT

A. POPULATION

The redevelopment plan contains a non-discrimination policy, but does not provide any incentives for provision of low- or moderate-income housing. In order to partially mitigate this, affirmative action rental and personnel programs could be required of the developer and future commercial tenants. Such a requirement has not presently been proposed by the Redevelopment Agency.

B. SEISMIC

Development of the affected blocks pursuant to the amended redevelopment plan would be subject to subsequent environmental review. A soils report and foundation recommendations prepared pursuant to this review and to other City requirements would be reviewed by licensed engineers in the Department of Public Works. Development of the affected blocks would have to meet seismic standards of the City Building Code.

C. AIR QUALITY

San Francisco construction regulations regarding control of dust generation¹ during the construction phase of future development would be observed.

D. TRANSPORTATION

Mitigation of transportation impacts could include such measures as staggered work hours and transit and car-pooling incentives. These would have to be worked out by the Redevelopment Agency and the project sponsor with respect to specific development proposals.

^{1/} San Francisco Department of Public Works, Standard Specifications, Section 108.17, April 1, 1971.

E. ANIMALS AND PLANTS

Design review by the Redevelopment Agency, as per Section 807 of the redevelopment plan, would include review of landscaping plans for development. New landscaping would likely exceed that presently on the site, although it would not be as concentrated in any one location as at present.

F. ARCHAEOLOGICAL AND HISTORICAL

In the course of Redevelopment Agency review for future development on the affected blocks, a requirement would be established that should anything of potential archaeological or historical impact be found on the site, the contractor would be bound legally by its contract to stop construction to permit professional evaluation of the find.

G. NOISE

Construction-generated noise in future development would be limited by the San Francisco Noise Ordinance, as would that of motor vehicles.

California noise insulation standards, which were incorporated into Title 25, Chapter I, of the California Administrative Code, August 22, 1974, apply to new apartment houses and dwellings other than detached, one-family dwellings. These standards provide that exterior noise shall not result in interior noise levels that exceed an annual Community Noise Level (CNEL) of 45 decibels with all doors and windows closed. CNEL values are usually substantially the same as Ldn values (see page 18).

H. SEWAGE GENERATION

The present wet weather sewage overflow problem would be alleviated by implementation of the Wastewater Management Master Plan. Improvements to receiving water quality are expected in 1980, and will continue for a score or

more years thereafter.¹

I. ENERGY CONSUMPTION

Future development on the affected blocks would be designed to utilize energy conservation measures such as the standards of the State Energy Resources Conservation and Development Commission² and other similar standards³.

J. VIEWS AND VISUAL QUALITY

Design review by the Redevelopment Agency, as per Section 807 of the existing redevelopment plan, would mitigate the visual impact of the development permitted by this amendment.

1/ For further information see the EIR/S for the San Francisco Wastewater Management Master Plan, Department of City Planning, May 1974, and EIR for the North Shore Outfalls Consolidation, Department of City Planning, December 1975.

2/ California Administrative Code: Title 24, Building Standards for New Non-residential Buildings, and Title 25, Energy Insulation Standards for New Residential Buildings.

3/ Recommendations prepared by the National Bureau of Standards and the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Energy Design Manual for Residential Buildings prepared by the State Department of Housing and Community Development, April 1976.

CHAPTER VI. ANY ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT
BE AVOIDED IF THE PROPOSAL IS IMPLEMENTED

The potential for residential housing in the downtown area would be reduced, with a resultant potential increase in commute trips, based upon the plan amendment. Residents and employees would be located in an area of seismic hazard, although at a lower density than previously permitted. Air quality would be affected through increased levels of carbon monoxide, generated due to anticipated traffic increases based upon the amended redevelopment plan. The plan amendment would permit increased levels of electrical consumption over what previously had been anticipated.

CHAPTER VII. ALTERNATIVES TO THE PROPOSED ACTION

A. THE NO-PROJECT ALTERNATIVE

This alternative would retain Section 804 of the Redevelopment Plan in its present form. This would have the effect of permitting 25-story buildings, more than tripling the number of housing units, eliminating the office space, increasing the parking spaces, and decreasing the permitted lot coverage.

The City Planning Commission, in certifying the completion of the Final Environmental Impact Report for a development pursuant to the existing redevelopment plan¹, determined that said development would have a significant effect on the environment, and that the blockage of views and lack of transition between downtown high-rise buildings and Telegraph Hill low-rise buildings that would result from the project were significant adverse environmental effects.

Development of a substantial number of housing units in this area, however, would have provided (1) increased night-time and weekend activity along the waterfront and within the downtown area, contributing to the vitality of the area, and (2) increased support of neighborhood services, as additional residents would help to support additional commercial services for existing residents.

B. RESIDENTIAL INCREASE AND COMMERCIAL DECREASE

An increase in the number of residential units, and a decrease in the amount of office facility square footage, within the proposed building envelope, would be consistent with objectives of the City as expressed in the Residence Element² and the present Redevelopment Plan. It would reduce air quality and

¹/ Op. cit.

²/ Op. cit.

transportation impacts, and electrical consumption, and would increase the population at any one time, natural gas and water consumption, and sewage generation. It would provide some of the indirect housing benefits as indicated in the preceding section.

On review of the economics of a current building proposal for one block¹, higher density at this time is not considered practical². However, in the event that economics change, the developer could pursue higher density residential development, at the expense of commercial development, to the extent that it is economically feasible to do so. Such a shift back from commercial to residential use would be required, if economically feasible, by the redevelopment plan amendment, at the discretion of the Redevelopment Agency (Section 804(a)).

C. LOW- AND MODERATE-INCOME HOUSING

The redevelopment plan amendment could include provision for the inclusion of a percentage of low- or moderate-income housing. This would be consistent with objectives of the City, as expressed in the Residence Element³ and the Subdivision Code⁴. This would be expected to reduce those impacts of potential development that may be related to income levels of residents, such as water and energy consumption and traffic generation.

1/ Block 171, with 134 parking stalls, one level of office/retail space, and two levels of residential space (42 units).

2/ Letter of Rai Y. Okamoto, Director of Planning, to Arthur F. Evans, Executive Director, San Francisco Redevelopment Agency, July 29, 1976.

3/ Op. cit.

4/ Section 1341 of the Subdivision Code states that in projects with 50 or more units, the subdivider shall make available 10% of the units for low and moderate income occupancy, if governmental subsidies are available.

D. OFFICE INCREASE AND RESIDENTIAL DECREASE

An increase in the amount of office space and decrease in residential units would be contrary to objectives of the City as expressed in the Residence Element¹. It would increase air quality and transportation impacts, electrical consumption, and the population at any one time, and would decrease natural gas and water consumption and sewage generation.

E. OTHER ALTERNATIVES

Specific design requirements could be included in the plan amendment, such as a requirement that ground floor uses on the frontages facing the park be service retail uses and that there be no parking access from these frontages². Such a requirement could also be presented to the developer by the Redevelopment Agency in its design review process (see Chapter V, Section I).

Retention of the site in its present state would eliminate the impacts discussed herein, and would retain the present public parking, construction/storage yard and temporary parking. It would also preserve the openness of the site, with no view blockage at any level.

Development of a park on the affected blocks would integrate Walton Square with Justin Hermann Park, both within the Project. The area is not designated a high-need neighborhood in the Recreation and Open Space Element³, however, and

1/ Op. cit.

2/ As suggested by Director of Planning in letter of July 29, 1976.

3/ Recreation and Open Space Element of the Comprehensive Plan, Department of City Planning, May 1973, Neighborhood Policy 3.

existing parks in the vicinity are considered adequate by the Department of City Planning.

Development of a community service center or recreation and adult education facilities had earlier been suggested (see Chapter IV, Section L). Chinatown and the North of Market area, which are adjacent neighborhoods, have been identified as Priority "A" neighborhoods in terms of existing needs for neighborhood centers¹. The Community Development Program of the City has already reserved approximately \$1.5 million for additional neighborhood centers², and studies are currently underway concerning such centers within the Department of City Planning. The Department does not consider the location of the affected blocks to be appropriate for such a center, in terms of distance from the priority neighborhoods.

1/ Inventory of Existing Needs for Neighborhood Centers in San Francisco, Urban Management Consultants of San Francisco, Inc., and Dukes-Dukes and Associates, prepared for the Department of City Planning, November 1975, "Recommendations for Priority Neighborhoods."

2/ 1977 Community Development Program & Housing Assistance Plan, Preliminary Proposal, Mayor's Office of Community Development, July 1976, p. 6.

CHAPTER VIII. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Cumulative and long-term effects of the plan amendment which adversely affect the environment include anticipated increase in automobile trips due to development permitted on the affected blocks, with resultant traffic congestion, fuel consumption and air quality impacts, and the increase in electrical consumption anticipated in development permitted on the affected blocks. These effects are typical of that of other new development occurring in the vicinity.

The provision of office and general commercial space in the affected blocks, at the expense of previously-proposed residential units, reduces the number of dwelling units that can be located in close proximity to the downtown area, as such potential sites are limited (see Chapter IV, Section A).

Amendment of the redevelopment plan should be undertaken now in order to determine what future development should be permitted on the affected blocks. Development permitted under the existing plan has been evaluated as undesirable (see Chapter IV, Section L), and the sooner the question of desirable future development has been resolved, the sooner this centrally located public property can be developed in a manner consistent with City goals and objectives. Additionally, an option has been reserved in the plan amendment for giving residential precedence over other permitted uses, depending upon economics (Section 804(a)).

CHAPTER IX. ANY IRREVERSIBLE ENVIRONMENTAL CHANGES
WHICH WOULD BE INVOLVED IN THE PROPOSED
ACTION SHOULD IT BE IMPLEMENTED

The redevelopment plan amendment would not necessarily have any irreversible effects, as the redevelopment plan could be amended again prior to future development. However, inasmuch as development of the affected blocks may be committed before any future amendments ensue, the change in what development would be permitted should be evaluated as irreversible.

Non-renewable resources involved include the public land, presently underdeveloped and in a centralized location, and the energy and materials used in the construction of any future development that would be permitted on that land. This does not represent any change in what the present redevelopment plan would involve, and with respect to construction energy and materials, there would likely be less use of resources due to the scaled-down development permitted. The plan amendment similarly would be expected to reduce the consumption of non-renewable resources during the operation phase of future development, compared to that anticipated from the present redevelopment plan.

CHAPTER X. THE GROWTH-INDUCING IMPACT OF THE PROPOSED ACTION

The plan amendment would shift development on the affected blocks from residential to residential/commercial. In so doing, it would provide less inducement to population growth, and greater inducement to an increased number of commuters, than the present plan amendment. In retaining some residential, however, it would retain some inducement to population growth.

The commercial intensification that the plan amendment represents is similar in orientation to that of other existing and new development in the downtown area (an exception to this is the existing Phase I and Phase II Golden Gateway Center portions of the Project, which are primarily residential). This increase in commercial use would impact similar public services and other aspects of the environment as other nearby development, increasing such concentration in that part of the City. The tenants of office facilities are expected to represent the growth of existing San Francisco businesses and the establishment of new San Francisco business, and would provide a demand for increased housing in the region.

Although part of a more extensive redevelopment plan, the amendment directly affects only Blocks 167, 168 and 171. The plan amendment is unlikely to have any effect on final development of a building at the Four Embarcadero Center site (see Chapter III, Section A), which, if it occurs, would be by a different developer¹.

¹/ Embarcadero Center

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100 California Street
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Attn: Ms. Jean Circiello, Librarian

HUD - Area C
1 Embarcadero Center, Suite 1600
San Francisco, CA 94111
Attn: Mr. Steven Sachs
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State Agencies

State Attorney General's Office
6000 State Building
350 McAllister Street
San Francisco, CA 94102
Attn: Ms. Louise Renne

Bay Area Air Pollution Control District
939 Ellis Street
San Francisco, CA 94109
Attn: Mr. Ralph Mead

Air Resources Board
1709 Eleventh Street
San Francisco, CA 95814

Regional Water Quality Control Board
San Francisco Region
1111 Jackson Street, Room 6040
Oakland, CA 94607
Attn: Mr. Donald Dalke

Regional Agencies

Association of Bay Area Governments
Areawide Clearinghouse Plan
Environmental and Project
Review Section
Hotel Claremont
Berkeley, CA 94705

Local Agencies

Office of Community Development
939 Ellis Street
San Francisco, CA 94109
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San Francisco Housing Authority
440 Turk Street
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Public Utilities Commission
949 Presidio Avenue
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Attn: Mr. James J. Finn
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260 Golden Gate Avenue
San Francisco, CA 94102
Attn: Chief Robert E. Rose

Real Estate Department
450 McAllister Street
San Francisco, CA 94102
Attn: Mr. Wallace Wortman
Director of Property

Groups and Individuals

Golden Gateway Center, Inc.
99 Jackson Street
San Francisco, CA 94111
Attn: Mr. David Towner

Embarcadero Center
#2 Embarcadero Center
San Francisco, CA 94111
Attn: Mr. James Bronkema
Executive Director

San Francisco Ecology Center
13 Columbus Avenue
San Francisco, CA 94111

Sierra Club
San Francisco Bay Chapter
5608 College Avenue
Oakland, CA 94618

Friends of the Earth
529 Commercial Street
San Francisco, CA 94111
Attn: Ms. Connie Parrish

SPUR
126 Post Street
San Francisco, CA 94108
Attn: Mr. Mike McGill
Mr. Roger Hurlbert

San Francisco Tomorrow
9 First Street
San Francisco, CA 94105

The Foundation for San Francisco's
Architectural Heritage
2007 Franklin Street
San Francisco, CA 94109
Attn: Mr. Robert Berner

San Francisco Beautiful
120 Bush Street
San Francisco, CA 94104

Chamber of Commerce
400 Montgomery Street
San Francisco, CA 94104

Self Help for the Elderly
3 Old Chinatown Lane
San Francisco, CA 94108
Attn: Mr. Alan Wong, Director

Coalition for Neighborhood Facilities
%Self Help for the Elderly
3 Old Chinatown Lane
San Francisco, CA 94108
Attn: Mr. George Ong

Telegraph Hill Dwellers
386 Chestnut Street
San Francisco, CA 94133
Attn: Mr. Robert M. Tibbits, President

Mr. Dwight Merriman
3200 Crocker Plaza
San Francisco, CA 94104

Chinese for Affirmative Action
669 Clay Street, #3F
San Francisco, CA 94111
Attn: Mr. Henry Der

Committee for Better Parks and
Recreation Facilities for Chinatown
920 Sacramento Street
San Francisco, CA 94108
Attn: Sister Beverly Karnatz

Chinese Chamber of Commerce
730 Sacramento Street
San Francisco, CA 94108

Chinatown Coalition for Better Housing
920 Sacramento Street
San Francisco, CA 94108
Attn: Mr. Harry Chuck

Chinese American Citizens Alliance
1044 Stockton Street
San Francisco, CA 94108
Attn: Mr. Leonard Louie, President

Ms. Linda Wong
1548 Stockton Street
San Francisco, CA 94105

Coalition of San Francisco Neighborhoods
P. O. Box 5882
San Francisco, CA 94101

Northern California Committee
for Environmental Information
P. O. Box 761
Berkeley, CA 94701
Attn: Mr. Donald Dahlsten

Libraries

San Francisco Public Library
Civic Center
San Francisco, CA 94102
Attn: Documents Department
Ms. Karen Scannell
Chief of Branches

Hastings College of the Law
Library
198 McAllister Street
San Francisco, CA 94102

Social Science, Business and
Ethnic Studies Library
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132
Attn: Ms. Mimi Sayer

News Media

San Francisco Chronicle
925 Mission Street
San Francisco, CA 94103
Attn: Mr. Dale Champion

San Francisco Bay Guardian
1070 Bryant Street
San Francisco, CA 94110
Attn: Mr. Ken McEldowney

San Francisco Progress
851 Howard Street
San Francisco, CA 94103
Attn: Mr. Dan Borsuk

San Francisco Examiner
110 Fifth Street
San Francisco, CA 94103
Attn: Mr. Don Cantor

KPIX TV
2655 Van Ness Avenue
San Francisco, CA 94109

KP00
P. O. Box 11008
San Francisco, CA

Environmental News Center
KPFA-FM Radio Station
2207 Shattuck Avenue
Berkeley, CA

KRON TV
1001 Van Ness Avenue
San Francisco, CA 94109

KFRC AM-FM
415 Bush Street
San Francisco, CA 94108

KGO Radio
277 Golden Gate Avenue
San Francisco, CA 94102

APPENDIX A

REDEVELOPMENT PLAN AMENDMENTS

Proposed Amendments to Sec. 804 of the Official Redevelopment Plan for the Embarcadero-Lower Market Approved Redevelopment Project Area E-1.

SEC. 804. RESIDENTIAL AREA. Based upon the standards set forth below, it is estimated that ~~2294~~ *approximately 1654* dwelling units can be constructed.

(a) Residential use shall be the only use permitted in or for that part of the Redevelopment Area indicated in the Project Area Plan for such use, except that within such residential area, *below the floor of the lowest story intended for dwelling purposes and subject to the approval of the Agency*, neighborhood shopping facilities in Blocks 198, 199, and 200, and neighborhood shopping, general commercial and office use facilities in Blocks 167, 168, and 171, the aggregate gross floor area of which is not greater than ~~75,000~~ *292,000* square feet, will be permitted. The uses permitted within such neighborhood shopping facilities shall be in the nature of personal service establishments or retail business which supplies new commodities or offers personal services primarily to residents in the immediate vicinity. *Where neighborhood shopping, general commercial and office uses are developed with residential uses, residential shall be the primary use and shall take precedence over other permitted uses upon development unless the Agency shall find such precedence to be economically infeasible.*

(b) Residential use shall consist of multi-family residential use and such community facilities as may be approved by the Agency and shall be subject

to the following requirements and restrictions:

1. The allowable density shall be 160 - 300 persons per net acre.
2. ~~Maximum-land-coverage-above-the-second-floor-shall-be-20%-of-the-net-land-area-including-easements.--Where-coverage-up-to-the-second-floor-above-grade-exceeds-20%,--no-apartment-units-will-be-permitted-below-the-third-floor-above-grade.~~ *The maximum land coverage by buildings, or portions of buildings, above the floor of the lowest story intended for dwelling purposes and up to 40 feet above said floor shall be 40 percent of the net land area including easements. The maximum land coverage by portions of buildings higher than 40 feet above the floor of the lowest story intended for dwelling purposes shall be 20 percent of the net land area including easements.*

3. The maximum allowable height of buildings shall be "twenty-five {25}"-stories--as follows:

For Blocks 198, 199, and 200: twenty-five stories.

For remaining residential Blocks: 84 feet.

The maximum floor area ratio shall be 4 to 1.

4. There shall be a set-back of fifty (50) feet along the easterly line of Battery Street between Washington Street and Jackson Street. This set-back shall be landscaped to provide a formal mall opposite the old Custom House.

5. At least 20% of the net land area including easements shall be landscaped and such landscaped area shall be adjacent to the apartments.

6. ~~The minimum distance between buildings and widths of courts between building units shall be "forty-(40)" feet.~~ *In the case of buildings having a height of at least 40 feet above the floor of the lowest story intended for dwelling purposes, the minimum distance between such buildings and widths of courts between building units shall be 40 feet.*

(c) Parking Requirements. There shall be provided in the residential area, ~~one off-street parking space for each dwelling unit~~ *off-street parking spaces as follows:*

| | |
|--|---|
| <i>Dwellings:</i> | <i>One for each three dwelling units containing no bedroom; one for each two dwelling units containing one bedroom; and three for each four dwelling units containing two or more bedrooms.</i> |
| <i>Offices:</i> | <i>One for each 500 square feet of occupied floor area.</i> |
| <i>Neighborhood Shopping and General Commercial:</i> | <i>One for each 500 square feet of occupied floor area in excess of 75,000 square feet.</i> |

Each required parking space shall be of usable shape, accessible and properly maintained and shall have an area of not less than one hundred and sixty (160) square feet exclusive of access drives and aisles.

Combined use of off-street parking facilities shall be subject to the approval of the Agency. No parking space shall be further than six hundred (600) feet from the apartment building for which it is provided.

APPENDIX B

TRANSPORTATION AND AIR QUALITY

A. Transportation.

Residential units and commercial space would generate daily trips involving San Francisco, Peninsula, East Bay and North Bay origins or destinations (commercial space has been evaluated as office space). Using trip generation and other data, it is possible to estimate trips for future development as permitted under the redevelopment plan amendment, and to distribute those trips by mode of travel and by general origin and destination.

It is estimated that trips (all come and go) would be generated as follows:

- (1) residential would generate 4.0 automobile trips per unit per day, including service and visitor trips.¹
- (2) commercial would generate 2.5 trips per person per day.²
- (3) employees related to the Phase III residential area would decrease from 45 to 20, based upon experience at the Golden Gateway Center Phases I and II, and would generate 2.5 trips per person per day (assumed equivalent to commercial).

It is estimated that employee trip origins and destinations would be as follows:³

- (1) San Francisco - 62%
(Southwest, 22%; Northwest, 18%; Northeast, 16%; Southeast, 6%)⁴

^{1/} Survey by John Knachel of Golden Gateway Center Staff, for Phases I and II, May 1976, as per memorandum of W. Mason, San Francisco Redevelopment Agency, September 16, 1976, indicated 1.27 garage entries daily. Doubling this gives 2.54 total trips, which, when expanded by 50% to include visitor vehicular trips and non-garage resident vehicular trips, results in approximately 4.0 vehicular trips daily.

^{2/} Wilbur Smith and Associates, Studies in Eight Cities, Center City Transportation Project, various dates.

^{3/} Transportation Planning Section, Department of City Planning, from works in progress.

^{4/} Extrapolated from Draft Environmental Impact Report for Yerba Buena Center, Public Facilities and Private Development, URS Research Company and Arthur D. Little, Inc., May 1973, page V-G-13, "Distribution of Movements by Origin-Destination and Mode of Travel."

- (2) Peninsula (San Mateo County and south) - 17%
- (3) East Bay - 13%
- (4) North Bay - 8%

It is estimated that distribution of commercial work trips by mode would be as follows:¹

- (1) San Francisco: transit, 57%; automobile drivers, 22%; automobile passengers, 7%; walk, 12%; other, 2%.
- (2) Peninsula: transit, 19%; automobile, 81%
- (3) East Bay: transit, 42%; automobile, 58%
- (4) North Bay: transit, 26%; automobile, 74%

It is estimated that there would be 1.3 persons per automobile, derived from the above statistic that of San Francisco workers commuting to the central business district, 22% are automobile drivers and 7% are automobile passengers.

On the basis of these assumptions², the commercial trip generation would increase from approximately 200 to 3000 trips per day, with approximately 1350 transit, 1350 automobile (in 1050 automobiles) and 250 walk trips. The residential vehicular trip generation would decrease from approximately 5200 to 1600 automobiles per day.

1. Automobile

Future development on the affected blocks could result in approximately 2950 automobiles on the streets each day, compared with over 5200 under the existing plan. The peaking factors for such automobile trips are estimated at 25% for the one-hour P.M. peak for offices and 13% for apartments³. On this basis, there would be approximately 470 automobiles added to streets at the peak hour, compared to over 670 under the existing plan⁴.

1/ 1970 Census of Population, Journey to Work

2/ Detailed calculations are available at the Department of City Planning, for this and following projections.

3/ Guidelines for Air Quality Impact Analysis of Projects, Bay Area Air Pollution Control Project, June 1975, Exhibit 1, "Recommended Trip Generation Characteristics to be Used for Analysis."

4/ $25\% \times 1050 + 13\% \times 1600 = 470$; $13\% \times 5200 = 676$, commercial ignored.

Utilizing the origin/destination assumptions, it is estimated that 33% of the traffic would be distributed north, using Battery and Sansome Streets as major arteries and Front and Davis Streets as ancillary roadways. Approximately 67% of traffic would use Battery and Sansome Streets to the south, and 47% would use Clay and Washington Streets to and from the Embarcadero Freeway ramps.

Battery and Sansome Streets north (33%) would have approximately 900 additional automobiles each day, with 160 at the peak hour, compared with 1750 and 220, respectively, under the present plan.

Battery and Sansome Streets south (67%) would have approximately 1800 additional automobiles each day, with 320 at the peak hour, compared with 3500 and 440, respectively, under the existing plan.

Clay and Washington Streets (47%) would have approximately 1300 additional automobiles each day, with 230 at the peak hour, compared with 2600 and 330, respectively, under the existing plan.

This compares with minimum calculated peak hour capacities of 1300 vehicles on the Sansome/Battery couple north of Jackson Street (southerly boundary of Phase III, Golden Gateway Center Portion); 1440 vehicles on the Sansome/Battery couple south of Jackson Street; and 2000 vehicles on the Clay/Washington couple with the freeway ramps.¹

Traffic counts are not available at the Department of Public Works for enough blocks in the vicinity of the project to analyze fully the effects of the additional traffic on the affected streets. However, the counts that are available indicate the arterial streets in this area as at or near the peak hour capacities.²

2. Transit

With respect to transit, the commercial facilities would generate approximately 1350 transit trips daily, of which approximately 20%, or 270, would be generated at peak periods.³ Of these, not all would use the Municipal Railway, as some might use Golden Gate Transit or other systems (BART, Alameda County transit).

Transit use would be concentrated on the No. 32-Embarcadero and the No. 42-Third Street, which serve the vicinity of the affected blocks, on The Embarcadero and Sansome and Battery Streets, respectively. Each have been evaluated as exceeding suggested capacity standards by 2% during the 60-minute A.M. peak, and the No. 32 by 5% during the 60-minute P.M. peak.⁴ The load factors for these lines would be further increased by the up to

^{1/} See figure on Traffic Circulation, Vicinity of Redevelopment Project, available at the Department of City Planning.

^{2/} Ibid.

^{3/} San Francisco Muni Transportation Planning, Operations and Marketing Study, Wilbur Smith and Associates, Muni On-Board Survey Results, April 1976, page 31.

^{4/} Ibid., Milestone Report No. 1, June 1975, page 4-12. Suggested standard for the peak 60-minute period at the heaviest load point was a load factor of 125, or 125% of the seating capacity.

270 passengers at peak periods. No data is available for projecting transit use by future residents of the affected blocks, but it is expected that they would generally use transit in directions counter to the peak flow, thus reducing their effect upon transit loads. Such transit use would be reduced proportional to the reduction in dwelling units.

It has been recommended that the No. 42 line and the No. 19-Polk be merged to form a single, circular loop, running both ways.¹ If this occurred, transit service along this combined route would be improved, due to greater linkages with other transit routes and the provision of evening and weekend service. Additionally, the Northern Waterfront Planning Advisory Committee has recommended a Waterfront surface rail transit line², which would supplant the No. 32 bus and upgrade the level of service.

3. Parking

There are presently 80 short-term visitor and guest parking spaces on Block 171, east of Walton Square, and approximately 660 long-term spaces on Block 167, north of Walton Square, for a total of approximately 740 spaces.

It is possible to estimate the number of parking spaces that could be provided in future development on the affected blocks, if one assumed that both the anticipated number of dwelling units and the maximum amount of commercial (office) facilities were to be constructed. Although unlikely due to lot coverage and height considerations, if this were to occur, approximately 630 parking spaces might be provided³, less than the number presently on site.

This reduction in parking spaces, coupled with development on the affected blocks, may be expected to create unsatisfied parking demand in the area. The blocks are not, however, indicated for parking in the Transportation Element.⁴

1/ Ibid., Recommended Plan proposed by Wilbur Smith and Associates.

2/ Northern Waterfront Planning Advisory Committee, Meeting No. 7, August 20, 1976.

3/ Assumes 200 one-bedroom units, at one space for two units (100), 200 two-or-more bedroom units, at three for four (150), and 190,000 square feet of interior office space (80% of 240,000 square feet), at one space for each 500 square feet (380).

4/ Transportation Element of the Comprehensive Plan, Department of City Planning, April 1972, "Transportation Plan for Downtown and Vicinity."

B. Air Quality

Vehicular trips would generate the largest amount of emissions due to development on the affected blocks; the pollutant of primary concern would be carbon monoxide, due to the localized concentrations that could result. Using trip generation and distribution data as developed in the preceding section, and recommended methodology of the Bay Area Air Pollution Control District¹, it is possible to project carbon monoxide emissions due to automotive trips generated by future development on the affected blocks.

Using standard peaking factors², the amended redevelopment plan and the existing plan would produce automotive trips as follows: amended - 2650 daily, 1430 8-hour, 470 hourly; existing - 5270 daily, 2640 8-hour, 690 hourly.

It is estimated that carbon monoxide emissions would be generated at maximum concentrations as indicated as follows (in micrograms per cubic meter, Mg/m^3)³, for design year 1978:

| | Averaging Time | Regional | 1/2 Km. radius | Battery/Sansome |
|---------------|----------------|------------|----------------|-----------------|
| Amended Plan | 1-hour | 0.0000003 | 155 | 1065 |
| | 8-hour | 0.0000002 | 88 | 126 |
| Existing Plan | 1-hour | 0.0000005 | 293 | 1464 |
| | 8-hour | 0.0000004 | 167 | 233 |
| Difference | 1-hour | -0.0000002 | -138 | -399 |
| | 8-hour | -0.0000002 | -79 | -107 |

This compares with 1-hour and 8-hour air quality standards of 40,000 and 10,000 Mg/m^3 , respectively. The Golden Gateway Center apartments are the nearest sensitive receptors and, at their nearest point to the most heavily used roadway link (Battery Street), would be exposed to concentrations of carbon monoxide as follows (in Mg/m^3):

| | Averaging Time | Concentration |
|---------------|----------------|---------------|
| Amended Plan | 1-hour | 586 |
| | 8-hour | 67 |
| Existing Plan | 1-hour | 805 |
| | 8-hour | 123 |
| Difference | 1-hour | -219 |
| | 8-hour | -56 |

^{1/} Guidelines for Air Quality Impact Analysis of Projects, Bay Area Air Pollution Control District, June 1975.

^{2/} Ibid., Exhibit 1, Recommended Trip Generation Characteristics to be Used for Analysis.

^{3/} Ibid., Computation Sheets 2, 3 and 4. Available at the Department of City Planning.

These projections compare with mean high-hour carbon monoxide concentrations measured at Ellis Street and Van Ness Avenue ranging from 3.3 to 7.2 parts per million, or from 3700 to 8200 Mg/m^3 .¹ These concentrations would convert, on an 8-hour basis, to from 1295 to 2870 Mg/m^3 .² No concentration readings are available for the specific area in question, but it is assumed that the cited measurements would be generally equivalent.

The carbon monoxide emissions from future development would add to existing carbon monoxide levels, but on the basis of the above projections and assumptions, new emissions at their maximum would represent approximately 29% of present low levels.³ This would represent a reduction from the 40% anticipated under the present plan.

1/ Bay Area Air Pollution Control District, Technical Services Division, Contaminant and Weather Survey, April 1976 and January 1976. The two months were relatively low and high months, respectively.

2/ Guidelines, op. cit., p. A3, Averaging time conversion factors.

3/ Battery and Sansome Streets, at 1065 Mg/m^3 , compared to 3700 Mg/m^3 at Ellis Street and Van Ness Avenue, for amended plan. for existing plan, 1464 compared to 3700.

